

STANFORD UNIVERSITY  
MEDICAL CENTER  
PALO ALTO, CALIFORNIA

DEPARTMENT OF GENETICS  
*School of Medicine*

July 24, 1961

DAvenport 1-1200  
Cables STANMED

Dr. David Rammner  
Institute for Enzyme Research  
University of Wisconsin  
Madison 6, Wisconsin

Dear Dr. Rammner:

Bill Razzell who, as you probably know, is working nearby at the Syntax Institute, suggested that I might profitably write to you concerning an appointment we hope to fill in this department in the near future.

I am seeking a research associate whose experience and fields of interest might well correspond to yours, to collaborate in two related fields of investigation which together are the principal occupation in my laboratory here. These are exobiology and genetic chemistry. I am enclosing a resume of our general program in exobiology to help answer some anticipated questions as to what this is about. I'm also enclosing a reprint on linkage in *Bacillus subtilis* which is the first publication from our work on DNA transfer in this organism.

The exobiology program is now very well staffed from the engineering standpoint, and we have three designers and engineers working on the instrumentation. The other side of the program is much less well attended to, and I'm afraid I simply have not had enough time to develop and follow up all of the leads that should be to meet this important and urgent challenge. At the present time there are two technical assistants who would be responsible to the research associate now in question. The basic problem remains how best we should detect and characterize a planetary life system within the restraints of a space craft mission. Some of the specific approaches that we are looking into are summarized in the enclosures, and it is the job of the laboratory to combine the insights of biochemistry and engineering to construct realistic and effective proposals for space experiments. As a rule the actual final design and construction of the experiments will become accomplished by industrial contracts let by NASA according to the leads and specifications derived from the laboratory work.

In genetic chemistry we are now principally engaged in the isolation of DNA fractions which have specific genetic activity and, in connection with this, in the fracture of DNA molecules carrying the extensive indole histidine aromatic amino acids biosynthesis linkage group into the constituent genes. This work calls for a careful correlation of biological and physical-chemical studies and its connection with at least the instrumental and some of the conceptual aspects of the exobiology work should be obvious. The system is also an unusual one for investigating the influence of specific chemical alteration of DNA on

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genetic activity as we have already attempted to exploit, without much success with deamination. We have, however, not been as energetic in the physical-chemical characterization of the material we worked with as should be the case for a balanced program. We are rather fortunate here in having Kornberg's group immediately next to us at Stanford and Bill Razzell, John Moffat, and the others at Syntex also interested in related problems. We have had a very happy and constructive relationship on both sides, and this is a tremendous asset as it should also be to any newcomer.

If you feel that you might be qualified and interested to work along these lines and might be available within the next few months, please call me, collect, at DAVenport 1-5842 at your earliest convenience. I will unfortunately be leaving for Denver from next Tuesday for the remainder of the week, and hope that it will be convenient to hear from you before my departure. Doubtless, if the general prospects are mutually agreeable we would both wish to arrange for a more detailed review with a personal visit. It would be appreciated if you could send me a more complete biography than Bill could give me over the phone, and a list of, or even better if available, copies of your publications.

Yours sincerely,

Joshua Lederberg  
Professor of Genetics